went to didn't know anything about the remedy, and he prescribed it.

Mr. Hynes: If the Court please, I have not read the transcript in this particular case, but the viciousness of this particular kind of thing, if there is any, it seems to me might appear in this, that if a man is permitted to do this sort of thing and prescribe these kinds of remedies, there is no reason why a man like Bohannas can't prescribe medicines for cancer, and things of that sort.

The Court: Well, you have fixed it up so he can.

Mr. Hynes: I have tried to get him a number of years.

Mr. Frost: Just a moment. I am informed by Mr. Taggart that the case was reported through the Berkeley Police Department to Dr. Betten, the health officer there, and that Dr. Betten reported it to him, to the State Board of Medical Examiners.

Mr. Hynes: We haven't any objection to the man being placed on probation, if the Court pleases, but we were under the impression that one of the conditions of his probation should be that he ought not to prepare and sell these medicines.

Mr. Frost: Ought not to prescribe them.

Mr. Hynes: Ought not to prescribe them anyhow.

Mr. Frost: There are no objections to his selling them at all, but if he prescribes them, or in any way holds himself out as competent to practice medicine, why then he is practicing medicine under the definition as given by our Supreme Court. I don't think he ought to be permitted to do that.

The Court: Well, he may be placed on probation for the period of three months. There are so many apparently reputable physicians in this State —I won't say reputable physicians, but physicians that have got a certificate—who have no business to practice medicine, that if the Board would devote their attention to them, I think they would do a good deal more good. They are like some lawyers that have no business to be practicing at all.

DR. FRIEDMANN'S TUBERCULOSIS REMEDY.

By FRED I. LACKENBACH.

From the highly sensational accounts in the lay press, of this new "cure" for tuberculosis, one is strongly tempted to dismiss the subject without essaying to dissect out the kernel of truth which undoubtedly gives credence to Dr. Friedmann's discovery.

It would appear from a critical analysis of the reports at hand, that Dr. Friedmann has applied an old and established principle, and his main departure from methods commonly employed in the production of artificial immunity against the tubercle bacillus and its toxins, is the employment of a cold-blooded animal—the turtle—as a means of depriving the bacillus of its virulence without impairing its capacity as an immunizing agent. By just what means this is accomplished, Dr. Friedmann has not made known.

Since Dr. Robert Koch introduced his original tuberculin in 1890, a great many attempts have been made to modify the toxicity of the immunizing agent. There are at present in use a large number of preparations which are modifications of Koch's original Tuberculin ("O. T."), or suspensions of the cell substance, as Tubercle Residue and Bacillen Emulsion. These latter are essentially bacterial vaccines. In practically all of these preparations the unaltered bacillus or its toxin is the groundwork. The type of tuberculin arises from the different manipulations of these elementary substances.

The object aimed at in the employment of these various cell, or bacterial cell derivatives, is to produce a maximum of immunity against the tubercle bacillus and its toxins, with a minimum of toxic reaction. The toxicity of these products and the severe reactions arising from their employment has necessitated their employment in very moderate dosage. As a consequence the process of immunization proceeds very slowly.

It would appear that Dr. Friedmann employs for immunization purposes, live, instead of dead bacilli, these live organisms by cultural processes being deprived of their virulence, and are at the same time capable of producing a powerful immunizing response when inoculated into tuberculous human beings.

In vaccination against smallpox, the virus is attenuated (made less virulent) by passage through the calf. In immunizing against hydrophobia, the virus is attenuated by drying over potassium hydroxide. Live cultures of the bacillus typhosus are said to yield a better immunizing response than the employment of the devitalized bacteria. Attenuated cultures of the B. anthracis are employed for vaccinating cattle against anthrax.

To quote from Dr. Friedmann's paper read before the Berlin Medical Society, November 6, 1912: "The remedies recommended by Koch himself, as well as the numerous other preparations which are derived from a culture of the tubercle bacillus, are based on the right principle and have a similar action. For the true recognition of the fact that the antigens are contained in the exciting agent itself, has been for some time the basis of all therapeutic researches in tuberculosis.

"It has been tried to produce the active substances of the bacillus in the pure state by the most varied methods . . . in all the various methods used in the preparation of curative agents up to the present time, virulent strongly toxic-acting bacilli of either human tuberculosis or cattle tuberculosis have been the starting point. These, in spite of all endeavors to remove their poisonous properties through special procedures had the power naturally of causing considerable damage, or at least danger to the organism.

"Furthermore, through these energetic measures the exceedingly delicate antigens, i. e., the things which are able to form the specific antibodies, were damaged. Hence the task was to find as a curative a substance absolutely harmless even in large doses, which should contain, if possible, all the specific properties of the exciting agent, excepting its toxicity and virulence.

"This then had to be an avirulent atoxic bacillus, but this avirulence, this freedom from all pathogenic power, could not be attained through any severe treatment of the cultures through various additions, etc.; it had to be a bacillus of natural avirulence and moreover it had to be avirulent and atoxic in tuberculosis, as well as in non-tuberculosis individuals. And finally the exceedingly delicate antigens could not be affected by the slightest treatment; hence it had been a living bacillus. For even the apparently mildest methods of killing the bacillus affected the finest molecular constitution of its organism.

"All these factors being considered, a substance adapted to the cure of tuberculosis must fulfill the following conditions: it must consist of genuine living bacilli of natural, complete avirulence, and not subjected to any deleterious influences, additions, etc. . . . Only after I had succeeded in removing the last and slightest traces of virulence through proper transplantations and passages, did I employ the preparations in humans. At first I repeatedly injected myself, then tuberculosis adults, then tuberculosis children, and finally, as the curative effects were constantly confirmed, I injected children for purposes of immunization.

". . . Up to the present time I have treated with this preparation 1,182 individuals. I would go far

beyond the time at my disposal if I should go exhaustively into all the details of the preparation of the material (selection of culture medium, age and nature of the culture, its further elaboration and dosage). Only let this be emphasized, that the result is only ensured by the careful consideration of all these factors, which were gradually disclosed after years of painstaking work.

"Before I present to you the results in various classes of tuberculosis cases, I beg to express at this time my thanks to the numerous gentlemen who encouraged me through their confidence in my work, and who supported me by sending patients. And above all, through their constant corroborative observations and examinations: Drs. Bier, Hildebrandt, Schleich, Erich Mueller, Heymann, Blaschko, Neisser, Kuester, Gluck, Galewski, Karfunkel, Pulvermacher, Schwenk, Pannwitz, Oppenheim, Hennig, Solms, Nagelschmidt, Saalfeld, Mohr and Dosquet.

"In every method of use—subcutaneous, intramuscular, intravenous, per os, conjunctival, locally applied to exposed tuberculosis areas—the preparation has shown itself to be absolutely harmless, even in large doses. The treatment exists in its intramuscular administration, once, twice, or three times (seldom oftener), at long time intervals. Success or non-success depends upon the complete absorption of the preparation. An infiltration must be formed at the site of injection, in size between that of a nut and a small apple, which in the course of the succeeding weeks or months gradually disappears. So long as the tissue exists and is being gradually absorbed, the healing takes place.

"Only when the injected remedy is completely taken up and remains in the body, do the striking curative effects appear. These regularly appear soon and continue. Under the influence, often of but a single injection, we see bone and fistulae of several years' standing become clean and closing. . . ."

The paper closes with a considerable number of case reports covering various tuberculosis infections and demonstration of cases.

DIABETES-MELLITUS.

I am undertaking an exhastive research into the pathology, etiology and diet-therapy of Diabetes Mellitus. I am very anxious to hear from every physician in the United States who has a case under treatment, or who has had any experience in the treatment of this malady. Von Noorden says "the best treatment for the diabetic is the food containing the greatest amount of starch which the patient can bear without harm." If any physician who reads this has similar or contrary experience and would take the trouble to write me, I would esteem it a special privilege to hear from him, if only a postal card. Kindly address William E. Fitch, M. D., 355 W. 145th street, New York.

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-Official Remedies (1912), and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-Official Remedies":

Calcium glycerophosphate is monohydrated normal calcium glycerophosphate $Ca(CH_2OH.CHOH.CH_2)PO_4,H_2O$, containing 90 per cent. of anhydrous salt. It is a white powder, almost tasteless, slightly soluble in water, easily soluble in dilute acids. Glycerophosphates were introduced as "nerve foods" on the belief that the phosphorus was in a readily assimilable form. Recent animal experiments indicate that glycerophosphates possess no advantage over inorganic phosphates in phosphorus metabolism. Dose 0.2 to 0.65 Gm. in powders, wafers, capsules or tablets suspended in water or syrup, or dissolved by the addition of sufficient citric acid or diluted hydrochloric acid.

Calcium glycerophosphate, Monsanto, is a nonproprietary article and complies with the tests laid down for calcium glycerophosphate. Monsanto Chemical Works, St. Louis, Mo. (Jour. A. M. A., Jan. 4, 1913, p. 45.)

Slee's Refined and Concentrated Diphtheria Antitoxin is prepared according to Banzhaf's method. Supplied in packages containing 1,000, 2,000, 3,000, 4,000 and 5,000 units, in vials and also in syringes. The Abbott Alkaloidal Co., Chicago, Ill. (Jour. A. M. A., Jan. 4, 1913, p. 45.)

Vacules Cornutol contain cornutol 30 cc. in sealed ampules. The air in the container is removed before sealing whereby, it is claimed, deterioration is retarded. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Jan. 4, 1913, p. 45.)

NEW MEMBERS.

Jones, H. W., San Luis Obispo.
Bush, H. C., Colfax, Cal.
Ellis, W. L., Glenn, Cal.
Downing, W. E., Suisun, Cal.
Leachman, R. S., Vallejo, Cal.
Avery, Sam'l. D., Watsonville.
Congdon, W. R., Santa Cruz.
Hall, Geo. P., Sunnyvale, Cal.
Greenwood, Edna M., San Jose.
Loehr, Bert E., San Jose.
Purkitt, Theodora T., Willows, Cal.
Bernard, J. H., Truckee, Cal.
Peck, R. E., Winters, Cal.
Yates, Jno. C., San Diego.
Hensel, E. A., San Diego.
Johnson, Wm. J., National City, Cal.
Pollock, Robt., San Diego.
Burnham, M. P., Los Molinas, Cal.
Whittington, W., Dinuba, Cal.
Helgesen, S., Templeton, Cal.
Clarke, B. F., Paso Robles, Cal.
Randolph, Jno. A., Willows.
Gardner, J. T., Willows.
Lund, Chas. W., Willows.
Lund, Etta S., Willows.
Tremblay, F. X., Willows.
Lawson, Frank M., Willows.
Gatliff, W. W., Butte City.
Yates, H. N., Pacific Grove.
Harbaugh, Dorothy F., Loma Linda, Cal.
George, W. S., Antioch.
Sweetser, G. W., Crockett.
Jones, Jno. T., Grass Valley.

DEATHS.

Borland, Robert, San Francisco.
Potts, John S., San Francisco (Died in Los Angeles).
Arndt, H. R., Cleveland, Ohio (formerly San Francisco).
Schirman, M., San Francisco.
Brown, Eugene E., Martinez.
Hansen, Geo. F. (Petaluma, Cal.), formerly of San Francisco.
Blanev. Chas. H., address unknown.
Watkins, Antoinette Q., address unknown.
Steen, D. B., Los Angeles.
Young, C. C., Los Angeles.
Dogge, O. H., address unknown.
Kierulff, B. F., Los Angeles.